




UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/822,104 | 03/30/2001 | Thomas B. Harsch | TELNP137USA | 1162 |
| 7590 11/18/2004 | | | EXAMINER | |
| Himanshu S. Amin Amin & Turocy, LLP National City Center, 24th Floor 1900 East Ninth Street Cleveland, OH 44114 | | | CHO, HONG SOL | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2662 | |
| DATE MAILED: 11/18/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|--|--|
| Office Action Summary | Application No. | Applicant(s)  | |
| | 09/822,104 | HARSCH, THOMAS B. | |
| | Examiner | Art Unit | |
| | Hong Cho | 2662 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-49 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 39-46 is/are allowed.
- 6) ☒ Claim(s) 30,32,35-38 and 47-49 is/are rejected.
- 7) ☒ Claim(s) 31,33 and 34 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03-30-2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>05182001</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. Claims 30, 32, 35-38, and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haas (U.S. 5566225) in view of Vogel et al (U.S. 6405262) hereinafter referred to as Vogel.

Re claims 30, 38, and 47-49, Haas discloses a system which monitors the flow of data during a communication session between a mobile end-user device and a host (*a network device for use in a communication system*) via a wireless link established over a wireless network. Haas discloses a processor in the host receiving a keepalive packet from a mobile end-user device (*the processor of the network device receives a keepalive packet from the mobile communication unit at predetermined intervals*, column 4, lines 5-7).

Haas fails to expressly disclose a host with a transceiver for communication to the mobile device; however, it is well known in the art that a host in wireless communication should be equipped with a transceiver to communicate with a mobile device.

Haas fails to disclose ending an established connection if no communication is received from a mobile communication unit in a predetermined period of time. However, Vogel discloses the server destroying the interface after a pre-defined time without receiving a keepalive signal has elapsed (*the network device ends an established connection with the mobile communication unit if no communication is received from a mobile communication unit for a predetermined period of time*, column 2, lines 54-57).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Haas to adopt the process of Vogel in ending a network connection when there is no communication between a mobile device and a host so that a handoff control will be more convenient and faster.

Neither Haas nor Vogel discloses resetting the predetermined period of time such that the network device does not end the established connection when the keepalive packet is received. However, it is obvious that as long as the mobile device keeps sending a keepalive packet to a host, the connection between a mobile device and a host is active until next keepalive packet is received.

Re claim 32, Haas discloses changing a predetermined time widow (*the predetermined period of time being determined by a keepidle timer*, column 6, lines 42-44).

Re claim 35, neither Haas nor Vogel discloses resetting the predetermined period of time by using keepalive packet such that the network device does not end the established connection. However, it is obvious that as long as the mobile device keeps sending a keepalive packet to a host, the connection between a mobile device and a host is active until next keepalive packet is received.

Re claim 36, Haas discloses a host receiving a keepalive packet from a mobile end-user device (*the processor of the network device receives a keepalive packet from the mobile communication unit periodically*, column 4, lines 5-7). Haas fails to disclose receiving the keepalive packet in time intervals less than the predetermined time set by the network device. However, it is obvious to change a predetermined time window bigger than keepalive packet intervals (column 6, lines 42-44) to extend the connection time.

Re claim 37, Haas discloses TCP communication between the mobile user and a host.

Allowable Subject Matter

3. Claim 31, 33, and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

4. Claims 31, 33, and 34 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose the network device sending a keepalive probe upon expiration of the keepalive timer and resetting at least one of the keepidle timer.

Claims 39-46 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a keepalive packet with a preamble field synchronizing bits for allowing the network device to synchronize to the packet and a sending sequence field comprising a number one less than a sending

sequence number expected by the network device to cause the network device not to advance the sequence number of the network device.


Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - US Patent (5442637) to Nguyen discloses reducing the complexities of TCP for a high-speed networking environment
 - US Patent (6389129) to Cowan discloses interface for interfacing client programs with network devices

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hong Cho
Patent Examiner
11-12-2004


RICKY NGO
PRIMARY EXAMINER
11/15/04